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KENTUCKY HAZ ALERT

WORKERS DIE FROM HEAT STROKE

To prevent heatstroke, employers should:

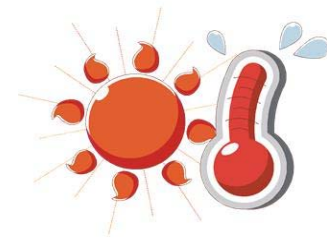
- Train supervisors and employees to recognize symptoms of heat stroke
- Give frequent breaks and provide drinking water
- Adjust work hours to accommodate work conditions such as high heat index and/or high humidity
- Monitor workers who are at risk of heat stroke

Employees should:

- Report unusual behavior
- Know how to treat co-workers for heat stroke
- Monitor your physical condition and that of your coworkers

In July 2011 two workers died as a direct result of heat stroke. Following are the case descriptions for the two work-related deaths:

Case 1: A 32-year-old male employee who worked for a tire company died of heat stroke. The employee changed a tractor tire in one of the company's bays. He then drove 30 minutes in an air conditioned vehicle to a private farm to change a tractor tire. He arrived at the farm in the morning. The high temperature of the day was 95 degrees with a maximum relative humidity of 90% and a minimum relative humidity of 57%. Just prior to noon, the farm owner observed the tire employee in a stupor, mumbling and stumbling. The company sent two additional employees, who took the stricken employee to the hospital. Fluids were administered, and the employee succumbed to heat



stroke. His internal temperature was recorded at 109 degrees.

Case 2: An 18-year-old male who worked for a landscaping company died of heat exposure. The high temperature for the day was 96 degrees with a minimum relative humidity of 52% and a maximum relative humidity of 85%. The worker complained about the heat to his co-workers in the early afternoon. Two hours later, the worker was incoherent. A relative tried to cool him down, and he was taken to the hospital via ambulance. The employee died from the heat stroke, with a body temperature of 110 degrees. The worker did not have any alcohol in his system, nor did he take any prescription medication.

When heat stroke occurs, the body temperature can rise to 106 degrees Fahrenheit or higher within 10 to 15 minutes.

TRAIN SUPERVISORS AND EMPLOYEES TO RECOGNIZE SYMPTOMS OF HEAT STROKE

According to, “The Physician and Sports Medicine”, heat stroke occurs when the body’s ability to dissipate heat is impeded either due to disease or physical exertion. Signs of heat stroke are: the person stops sweating, becomes dizzy, confused and/or disoriented, rapid pulse rate, dizziness, nausea, headache, or a high body temperature of 103 degrees Fahrenheit (1). External temperatures over 82 degrees Fahrenheit increase the risk for heat exhaustion / stroke (2). Employers and employees should observe each other for signs of heat exhaustion / stroke. Workers should be trained to know and understand company procedures for reporting a worker exhibiting symptoms of heat stress / stroke.

EMPLOYEES SHOULD BE GIVEN FREQUENT BREAKS AND PROVIDED DRINKING WATER

While working in heat, staying hydrated is important. Drinking the appropriate amount of fluids such as water and/or sports drinks that replace the body’s electrolytes helps the body maintain its appropriate temperature. It is suggested to match fluid loss from the body with fluid intake. Besides drinking plenty of fluids, employees should wear light colored clothing and fabrics that wick away moisture from the skin.

WORK HOURS SHOULD BE ADJUSTED TO ACCOMMODATE ENVIRONMENTAL WORK CONDITIONS

When high temperatures are predicted, employers should consider changing work hours to accommodate the weather. Instead of working in the heat of the day, work hours could be changed from 6:00 am to 2:30 pm, or at a time when heat and humidity exist at a lower level.

REPORT UNUSUAL BEHAVIOR

If workers have any of the following symptoms, they should immediately report it to a co-worker or supervisor:

- Hot, dry skin or profuse sweating
- Hallucinations
- Chills
- Throbbing headache
- High body temperature
- Confusion/dizziness
- Slurred speech



KNOW HOW TO TREAT CO-WORKERS FOR HEAT STROKE

Take the following steps to treat a worker with heat stroke:

- Call 911 and notify their supervisor.
- Move the sick worker to a cool shaded area.
- Cool the worker using methods such as:
 - ◊ Soaking their clothes with water.
 - ◊ Spraying, sponging, or showering them with water.
 - ◊ Fanning their body (3)

For more information, contact:

KY Fatality Assessment & Control Evaluation (FACE) Program, Kentucky Injury Prevention and Research Center (KIPRC)

333 Waller Ave., Suite 242

Lexington, KY 40504

1-800-204-3223 (toll-free)

<http://www.kiprc.uky.edu/face.html>

References:

- (1) www.cdc.gov/nceh/hsb/extremeheat/heatstroke.htm
- (2) www.physsportsmed.com/issues/1997/06jun/sandor.htm
- (3) www.cdc.gov/niosh/
- (4) NIOSH Fast Facts <http://www.cdc.gov/niosh/docs/2010-114/pdfs/2010-114.pdf>
- (5) NIOSH Workplace Safety and Health Topics <http://www.cdc.gov/niosh/topics/heatstress> (Topic Page)
- (6) OSHA-NIOSH INFOSHEET: Protecting Workers from Heat Illness <http://www.cdc.gov/niosh/docs/2011/174> (On this you can order cards or send out a PDF of the card)

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